



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4776-1

Job Sheet 180912



Part No: D4776-1

Job Qty: 25 ea

Part Name: Basket Strut Clevis



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/17/18

Job Tracking No:

Due Date: 7/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV D SHEET 1 IPP REV:A 13.02.28 NEW ISSUE DD VERF:JFS IPP REV:B 13.09.26 AS PER REV.B DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	25 Ea	7/31/18	7/31/18	0.00	0.00	Start Up Machining-3		
100	Doosan	25 pcs	7/31/18	7/31/18	0.54	13.30	Doosan		
105	QC	25 pcs	7/31/18	7/31/18	0.00	0.00	QC2 Machining-3		
111	QC	25 pcs	7/31/18	7/31/18	0.00	0.00	QC8 Machining-3		
112	HandFinish	25 pcs	7/31/18	7/31/18	0.00	0.72	HandFinish1		
113	QC	25 pcs	7/31/18	7/31/18	0.00	0.00	QC7-4		
115	Powdercoat	25 pcs	7/31/18	7/31/18	0.00	0.29	Powdercoat1		
116	QC	25 pcs	7/31/18	7/31/18	0.00	0.00	QC3		
130	Packaging	25 pcs	7/31/18	7/31/18	0.00	0.00	Packaging3-2		
140	QC21-SA	25 Ea	7/31/18	7/31/18	0.00	0.00	QC21		

Part Op 100 - 1- Turn as per Folio FB167 Dwg D4776 Rev: 2

Descriptions: 115 - MASK .403 ROUND SECTION AS PER DWG

M 82893 START: 2:25 OUT: 300° FINISH 2:55

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6R1.500	6061-T6 Round Bar 1.50	7.2500 ft (.29 ea)	90-Start up Operation	5069913

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M6061T6R1.500	7	37	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Basket Strut Clevis	0.880Inches ± 0.030	0.910 0.850	.879	
2	Basket Strut Clevis	0.438Inches ± 0.010	0.448 0.428	.440	
3	Basket Strut Clevis	0.380Inches ± 0.030	0.410 0.350	.3785	
4	Basket Strut Clevis	0.625Inches ± 0.010	0.635 0.615	.624	
5	Basket Strut Clevis	1.750Inches ± 0.030	1.780	1.7495	

Start 7/30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																		
Large Fab ☐	Composite ☐	Supplier ☐																																																																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																	
Description Work Order Deviation			Disposition		Completed By																																																																
					Lead hand / Supervisor Approval Verification																																																																
					QC / QA Coordinator Approval																																																																
Root Cause <table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>			Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																				
Design ☐	Operator ☐																																																																				
Doc/Data ☐	Offset/Setup ☐																																																																				
Equip/Tooling ☐	Supplier ☐																																																																				
Handling/Pre ☐	Training ☐																																																																				
Material ☐	Use for Testing ☐																																																																				
Internal Transport ☐	Poor Information ☐																																																																				
Tribal Knowledge ☐	Rushing ☐																																																																				
LOA ☐	Product Improvement ☐																																																																				
Substation ☐	Process Improvement ☐																																																																				
Past Expiry Date ☐	Manufacturing Process ☐																																																																				
Misidentified ☐	Past Due ☐																																																																				
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																		
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																		
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																		
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																		
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																		
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																		
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																		
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																		
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																		
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																		
OTHER :																																																																					

			1.720	
6	Basket Strut Clevis	3.500Inches ± 0.030	3.530 3.470	3.506
7	Basket Strut Clevis	45.000Degrees ± 0.500	45.500 44.500	45° Angle
8	Basket Strut Clevis	0.030Inches ± 0.030	0.060 0.000	.030
9	Basket Strut Clevis	0.060Inches ± 0.030	0.090 0.030	.055 Radius
10	Basket Strut Clevis	0.196Inches + 0.006 - 0.001	0.202 0.195	Diameter .1975
11	Basket Strut Clevis	0.261Inches + 0.006 - 0.001	0.267 0.260	Diameter .263
12	Basket Strut Clevis	0.410Inches ± 0.030	0.440 0.380	Radius .40
13	Basket Strut Clevis	1.130Inches ± 0.030	1.160 1.100	1.129
14	Basket Strut Clevis	0.188Inches ± 0.010	0.198 0.178	.186
15	Basket Strut Clevis	0.190Inches ± 0.030	0.220 0.160	.189
16	Basket Strut Clevis	0.500Inches ± 0.030	0.530 0.470	.502
17	Basket Strut Clevis	0.750Inches ± 0.010	0.760 0.740	.751
18	Basket Strut Clevis	0.403Inches + 0.000 - 0.005	0.403 0.398	Diameter .400 TAPER .001"
19	Basket Strut Clevis	0.130Inches ± 0.030	0.160 0.100	Radius .125
20	Basket Strut Clevis	0.750Inches + 0.010 - 0.000	0.760 0.750	.755
21	Basket Strut Clevis	0.160Inches ± 0.030	0.190 0.130	.155
22	Basket Strut Clevis	45.000Degrees ± 0.500	45.500 44.500	Angle 45°

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval _____																	
Description Work Order Deviation			Disposition																		
Dart Aerospace Ltd. 1270 Aberdeen Street Newbury, ON K4A 1K7 CANADA TEL: 1 813 832-5200 Email: sales@dartaero.com www.dartaero.com Container No: S103382 Part: D4776 - 1 Job No: 180912 Serial No/Batch: S103382 Revision: _____ Inspector: _____ Exp Date: _____ Instructions: Various STC's Date: 06/18/16			Dart Aerospace Ltd. 1270 Aberdeen Street Newbury, ON K4A 1K7 CANADA TEL: 1 813 832-5200 Email: sales@dartaero.com www.dartaero.com Container No: S103382 Part: D4776 - 1 Job No: 180912 Serial No/Batch: S103382 Revision: _____ Inspector: _____ Exp Date: _____ Instructions: Various STC's Date: 06/18/16																		
Completed By _____																					

Root Cause			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	
Design ☐	Operator ☐	Bending ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	
Past Expiry Date ☐	Manufacturing Process ☐		
Misidentified ☐	Past Due ☐		
OTHER : _____			

☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence